REMARKS

Reconsideration and allowance of the subject patent application are respectfully requested.

The specification has been amended to include headings and to contain a specific reference to the corresponding PCT application.

Claims 4-13 have been amended to refer to "methods" and withdrawal of the objection to these claims is respectfully requested.

Page 2 of the office action suggests that claim 10 of this application was canceled. However, claim 10 was not canceled by the Preliminary Amendment filed on May 11, 2001 and thus this claim remains pending in this application.

Claim 3 has been amended and is now believed to comply with the requirements of 35 U.S.C. Section 112, second paragraph. Consequently, withdrawal of the Section 112, second paragraph, rejection of this claim is respectfully requested.

While not acquiescing in the prior art rejections stated in the office action, claims 1-11 and 13 have been amended and claim 12 has been canceled without prejudice or disclaimer. As such, the discussion below makes reference to the amended claims.

Claims 1-4 and 11-13 were rejected under 35 U.S.C. Section 102(b) as allegedly being "anticipated" by Noda *et al.* (U.S. Patent No. 5,617,135). Noda *et al.* describes a system in which the spatial and temporal resolution of a continuous stream of video data can be adjusted according to various requirements. By means of an adaptive spatial filter using a real-time m by n pixel convolution, Noda *et al.* adjusts the spatial frequency characteristics of a single digital video signal during live transmission over a heterogeneous network to several simultaneous viewers, in order to provide an optimized match between the spatial resolution of the live digital video signal being transmitted and the limited and dynamically varying available carrying capacity (bandwidth) of the telecommunications network being used to deliver the video signal. This will depend both upon the bandwidth of users' local branches from the main network and upon other third-party traffic on the network at the time. Noda *et al.* thus adjusts the video

quality being transmitted by statistical integration of the various video quality requests received from the viewers and the available bandwidth of the network, by applying at any one time a single filter estimated to give the optimized response. More specifically, if network conditions require this for effective receipt of the signal by one or more viewers, Noda *et al.* selectively degrades the spatial resolution of the video output signal by the application, as appropriate, of a low spatial resolution filter, a medium spatial resolution filter or a high spatial resolution filter.

Noda *et al.* also mentions an alternative transmission mode which also involves degrading the temporal resolution of the video signal. Specifically, Noda *et al.* permits the possibility of sending two live video signals of different spatial qualities simultaneously, by means of halving the temporal resolution, sending video data of high spatial resolution during the odd-numbered field periods and video information of low spatial resolution during the even-numbered field periods. This means that at any one time the system can transmit two video qualities within the same video signal, one of high spatial resolution and the other of low spatial resolution, both being of half the normal temporal resolution. Users would require special hardware to separate these two components, just as the system requires such special hardware (Figure 8) to encode them into a single video stream.

The method of claim 1 is quite different from the disclosure of Noda *et al.* Claim 1 relates to a method of requesting and retrieving customized video data derived from video data "contained within a video data file." Noda *et al.* does not consider video data files as such. Although Noda *et al.* could be viewed as processing video data, this video data is described only in the form of streamed data. There is no contemplation of accessing a video data file as such. The method of claim 1 goes on to describe "specifying a particular video data file." There is no disclosure in Noda *et al.* of particular video data files at a remote source or, therefore, the ability to specify one of those data files. According to Noda *et al.*, one multi-point user merely connects with another multi-point user.

The claim 1 method further comprises "requesting from the remote source a preview image" of video data contained within the particular video data file and "information concerning said video data". Noda *et al.* provides no disclosure of requesting a preview image or information concerning the video data. Indeed, because of the nature of the streaming video data

in Noda *et al.*, there is no possibility of providing a preview image. With the system of Noda *et al.*, the video data only becomes available in real time and it is not possible to view that data or a preview of that data in advance.

Claim 1 further describes "receiving from the remote source the preview image of the video data and the information concerning the video data." Because Noda *et al.* is not able to provide a preview image and does not describe providing "information concerning the video data," Noda *et al.* clearly does not disclose receiving a preview image and information.

Claim 1 further describes specifying parameters determining at least one of the desired "spatial extent, temporal extent and format characteristics" for customizing the video data contained within the particular video data file and sending the parameters to the remote source. As explained above, Noda *et al.* at best concerns only adapting the spatial or temporal resolution of the streamed video data. There is no disclosure or suggestion of being able to specify, for example, a desired spatial extent (a sub-area) of the total original area of the video image. Similarly, there is no suggestion or disclosure of specifying, for example, the temporal extent (*e.g.*, a clip) from the total original video sequence. Indeed, since Noda *et al.* does not consider a video data file containing video data of a finite length, it would not be possible with Noda *et al.* to specify a desired temporal extent for customized video data.

Claim 1 still further describes receiving the customized video data transmitted by the remote source after customization. With Noda *et al.*, processed video data is of course received from the transmitting user, but clearly the customization as described above is not carried out.

For at least the reasons set forth above, Noda *et al.* cannot anticipate claim 1. *See, e.g., Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) ("A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.")

Claims 4-11 and 13 depend from claim 1 and distinguish over Noda *et al.* because of this dependency and because of the additional patentable features contained therein.

Claims 2 and 3 are directed to a device and a video source, respectively, and correspond to the method recited in claim 1. Consequently, these claims distinguish over Noda *et al.* for reasons similar to those advanced with respect to claim 1.

Claims 1 and 5 were rejected under 35 U.S.C. Section 102(e) as allegedly being "anticipated" by Brusewitz *et al.* (WO 98/41021). Brusewitz *et al.* describes interactive control of the image quality of a video stream. As with Noda *et al.* discussed above, Brusewitz *et al.* considers spatial and temporal resolution, but provides no disclosure or suggestion of providing customized video data from video data files or of allowing the video data to be customized by specifying its spatial or temporal extent. Brusewitz *et al.* considers that a 'back channel' may be used by the recipient of a live video signal to adjust various parameters controlling the performance of a distant live transmitting video system (*e.g.*, a television camera), and hence to optimize for a particular purpose, on the fly, the quality of the live video signal transmitted by this system, which is compressed to reduce the amount of information being transmitted to match the carrying capacity (bandwidth) of the transmission medium. The parameters which influence both the degree of signal compression and the quality of the resulting image, include:

(a) the spatial resolution, *i.e.* the detail within each frame of the moving image data, determined by the number of pixels per line and the number of lines per frame,

(b) the temporal resolution, *i.e.* the number of frames transmitted per second, and

(c) the quantization parameters of the image compression codec (compression/decompression algorithm), that control the quality of the resulting image, which to a first approximation is reciprocally related to the degree of image compression, and which may be adjusted on a frame to frame basis according to the complexity of the visual information being conveyed in order to maintain the data transmission rate constant. This compression quality parameter is <u>not</u> the same as the video format.

This system is designed for a single user, and requires a specific back channel connection that permits information to be transmitted from the viewer to the live video transmission system to control these characteristics.

As discussed above, claim 1 describes a method of requesting and retrieving customized video data retrieved from "video data contained within a video data file." Brusewitz *et al.* is not concerned with pre-recorded video files but is used to optimize transmission of live video to network bandwidth availability. Claim 1 further describes "specifying a particular video data file." Brusewitz *et al.* provides no disclosure of specifying a file; the back channel is used to control a particular source. Claim 1 still further describes requesting "a preview image" of video data contained within the particular video file and "information concerning the video data." Brusewitz *et al.* provides no disclosure or suggestion of providing a preview image or information concerning the video data. Claim 1 describes receiving the preview image and the information concerning the video data. Again, because Brusewitz *et al.* does not consider providing a preview image or related information, there is clearly no disclosure or suggestion of an end user receiving this image or information.

Claim 1 further describes "specifying parameters determining at least one of the desired spatial extent, temporal extent and format characteristics for customizing the video data contained within the particular video data file." As explained above, Brusewitz *et al.* considers optimizing live transmission by adapting spatial and temporal resolution. However, there is no disclosure or suggestion of, for example, adapting the spatial extent or temporal extent of the video data. In other words, there is no disclosure of providing, for example, only part of the total original area of the video image for display; the entire area is transmitted but with a lower resolution. Similarly, there is no disclosure or suggestion of providing only a clip from the total original video data. Indeed, without the use of prerecorded video files, this would not be possible.

In addition, claim 1 describes receiving the customized video data. It will be appreciated that Brusewitz *et al.* does not disclose or suggest the customization as described above, such that this customized video data would not be received by the end user.

For at least these reasons, claim 1 cannot be anticipated by Brusewitz *et al.*

Claim 5 depends from claim 1 and distinguishes over Brusewitz *et al.* because of this dependency and because of the additional patentable features contained therein.

Claims 1 and 6-9 were rejected under 35 U.S.C. Section 102(e) as allegedly being "anticipated" by Hunt *et al.* (U.S. Patent No. 6,501,472). As will be appreciated, Hunt *et al.* concerns the processing of still graphical images, rather than video data. The image data on a server is customized in the sense of allowing the image to be sent as different data amounts or sizes. However, in contrast to the method of claim 1, there is no suggestion or disclosure of, for example, specifying a desired spatial extent. With Hunt *et al.*, the full spatial extent of the image is always sent, irrespective of the data file size which is sent to the end user. This is particularly clear from the paragraph bridging columns 8 and 9 and, in particular, the sentence bridging columns 8 and 9 where it is indicated that the first segment C1 (for the lowest image quality) is "used for displaying the image as a high quality, thumbnail size image or a low quality, feature size image."

Hunt describes a method whereby, by means of interactions between a client user and a distant server, the client can specify the desired compression quality of a stored digital graphical image prior to downloading it from the server, in order to reduce the file size and thereby improve the speed of network transmission. This is particularly useful if using a network connection of restricted carrying capacity (bandwidth) such as a modem. Acknowledging the trade-off that exists between image quality and compression time, the system nevertheless permits a user to specify that the image should be downloaded at the highest available resolution if required. In addition, Hunt *et al.* describes an interactive network connection between the author of the image and the server, whereby the author can select, interactively view and thus determine the best alternative levels of image compression to be stored by the server system in advance of such client download requests. The quality of image downloaded in response to a client request is selected as a result of a "negotiation tradeoff" between the author's pre-selected and saved levels of quality, the client's requested level of quality and the server default maximum level of quality, the transmitted image quality being at or as close below the client's request as is possible, as limited (a) by the availability of a suitable image quality having been pre-recorded by the author, and (b) by the default maximum quality allowable by the system server.

In Hunt *et al.*, various compression codecs such as fractal compression and progressive JPEG are discussed, that permit the encoding of image information in blocks of varying spatial

frequencies, starting with low spatial resolution and progressing to higher spatial resolutions, with the idea that high resolution original images compressed in such a way could be downloaded in a variety of sizes and spatial resolutions, depending upon how many of the higher resolution information blocks were transmitted for each image.

As discussed above, claim 1 defines a method of requesting and retrieving customized "video data" derived from a "video data file." Hunt *et al.* only refers to graphical images and does not disclose storing or processing video data. Claim 1 further describes specifying a particular file and requesting "a preview image", together with "information concerning the video data." Hunt *et al.* does not disclose the possibility of requesting a preview image or related information. In the paragraph bridging columns 8 and 9, Hunt *et al.* describes dividing an image into various segments where "each of the segments is additive to provide greater image quality". Thus, a user might possibly request an image of low quality and receive one or more of the lower segments and then decide to request the same image with a higher quality and receive the segments for the higher quality. However, there is no disclosure of requesting a preview as such; on all occasions, the user obtains the image which has been requested and the quality requested. There is no disclosure of providing information concerning the graphical image (and certainly not video data).

Claim 1 further describes receiving the preview image and the information concerning the video data. Because Hunt *et al.* does not provide the possibility of requesting a preview image or the related information, there is no disclosure of the end user receiving the image or information.

Claim 1 still further describes specifying parameters "determining at least one of the desired spatial extent, temporal extent and format characteristics" for customizing the video data. The office action suggests (with reference to Figure 11) that Hunt *et al.* considers customization spatially. Applicants assume that the office action is referring to the reference in Hunt *et al.* to "size." However, it is clear from the disclosure of Hunt *et al.* as a whole that reference to "size" is reference to the file size, *i.e.* the amount of data needed to be transmitted. For instance, column 8, line 34 refers to "image quality verses size", and column 8, lines 40 and 41 refers to "the graphical image file is modified 504 to have a variable or selectable quality verses size trade

off." Hunt *et al.* provides no disclosure of providing data representing only a portion of the total area of the original image. In all cases, the entire image is sent, but the data size used to do this is varied according to acceptable quality. Since Hunt considers only still graphical images, there is clearly no disclosure or suggestion of providing parameters determining the temporal extent of the required image.

Claim 1 further describes receiving the customized video data. From the above, it is clear that the customization applied by Hunt *et al.* is different from that of the method of claim 1 such that Hunt *et al.* does not disclose receiving data customized according to claim 1.

For at least these reason, Hunt *et al.* does not anticipate claim 1.

Claims 6-9 depend from claim 1 and distinguish over Hunt *et al.* because of this dependency and because of the additional patentable features contained therein.

New claims 14-35 have been added. The subject matter of these claims is fully supported by the original disclosure and no new matter is added. Claims 14-22 depend from claim 2 and claims 23-32 depend from claim 3. These claims are believed to distinguish over the applied references because of their dependencies from one of claims 2 and 3 and because of the additional patentable features contained therein. Claims 33-35 are believed to be allowable for reasons similar to those advanced above with respect to claims 1-11 and 13.

All pending claims are believed to be allowable and early notice to that effect is respectfully requested.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____ reg. no.: 32,

Michael J. Shea
Reg. No. 34,725

MJS:mjs
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100